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09/913,595	10/22/2001	Manabu Sasamoto	501.40474X00	3782

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EXAMINER

HENNING, MATTHEW T

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 12/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/913,595	Applicant(s) SASAMOTO ET AL.	
	Examiner Matthew T. Henning	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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1 This action is in response to the communication filed on 10/21/2005.

2 **DETAILED ACTION**

3 ***Continued Examination Under 37 CFR 1.114***

4
5 A request for continued examination under 37 CFR 1.114, including the fee set forth in
6 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is
7 eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)
8 has been timely paid, the finality of the previous Office action has been withdrawn pursuant to
9 37 CFR 1.114. Applicant's submission filed on 10/21/2005 has been entered.

10 ***Response to Arguments***

11 Applicant's arguments with respect to claims 1-18 have been considered but are moot in
12 view of the new ground(s) of rejection.

13 Claims 1-18 have been examined and 19-46 have been cancelled.

14 All objections and rejections not set forth below have been withdrawn.

15 ***Title***

16 The title of the invention as amended is acceptable.

17 ***Claim Rejections - 35 USC § 112***

18 The following is a quotation of the second paragraph of 35 U.S.C. 112:

19 The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
20 subject matter which the applicant regards as his invention.

21
22 Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing
23 to particularly point out and distinctly claim the subject matter which applicant regards as the
24 invention.

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1 Claim 4 recites the limitation "such information" in line 6. There is multiple antecedent
2 basis for this limitation in the claim. As such, the ordinary person skilled in the art would be
3 unable to determine whether the information being added to packets was the "information
4 capable of identifying timing" or the first key information or the second key information. The
5 examiner will assume, for purposes of searching art that the information being referred to is the
6 information capable of identifying timing.

7 Claim 4 further recites the limitation "said key information". It is unclear whether this is
8 referring to the first key information or the second key information.

9 ***Claim Rejections - 35 USC § 103***

10 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all
11 obviousness rejections set forth in this Office action:

12 *A patent may not be obtained though the invention is not identically disclosed or*
13 *described as set forth in section 102 of this title, if the differences between the subject matter*
14 *sought to be patented and the prior art are such that the subject matter as a whole would have*
15 *been obvious at the time the invention was made to a person having ordinary skill in the art to*
16 *which said subject matter pertains. Patentability shall not be negatived by the manner in which*
17 *the invention was made.*

18
19 Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chou (US
20 Patent Number 6,167,136), and further in view of Wonfor et al. (US Patent Number 6,381,747)
21 hereinafter referred to as Wonfor

22 Regarding claim 1, Chou disclosed a digital signal recorder for recording a digital signal
23 on a recording medium (See Chou Abstract), comprising: first key information generation unit to
24 generate at least one item of first key information which is apparatus specific key information
25 (See Chou Col. 6 Lines 34-38 DK_A); second key information generation unit to generate at least

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1 one item of second key information (See Chou Col. 6 Lines 39-43 and Col. 7 Paragraph 1; i);
2 key generation unit which receives said both of said first and second key information generated
3 by said first key information generation unit and said second key information generation unit and
4 performs a prescribed arithmetic operation thereon to generate a key (See Chou Col. 6 Lines 44-
5 58); an encryption circuit which receives said key and said digital signal and encrypts said digital
6 signal with said key (See Chou Col. 6 Lines 59-65), and outputs the resulting encrypted digital
7 signal in a case where said digital signal needs copy protection (See Chou Col. 6 Lines 59-65);
8 and a recording circuit which records at least one of said at least one item of second key
9 information generated by said second key information generation unit, together with said
10 encrypted digital signal in a case where said digital signal needs copy protection (See Chou Col.
11 6 Line 66 – Col. 7 Line 5), but failed to disclose recording said digital signal without encryption
12 in a case where said digital signal needs no copy protection.

13 Wonfor teaches that not all data needs to be copy protected and teaches a system that
14 turns off copy protection when it is not needed (See Wonfor Col. 2 Line 66 – Col. 3 Line 7 and
15 Col. 12 Table 2).

16 It would have been obvious to the ordinary person skilled in the art at the time of
17 invention to employ the teachings of Wonfor in the copy protection system of Chou by only
18 scrambling the data that needed copy protection and not scrambling the data that didn't need
19 copy protection. This would have been obvious because the ordinary person would have been
20 motivated to prevent unnecessary processing to copy protect data that did not need it.

21 Regarding claim 2, Chou and Wonfer disclosed that said digital signal has a packet
22 format of a prescribed length (See Chou Col. 6 Lines 17-23).

1 Regarding claim 3, Chou and Wonfer disclosed that the second key information
2 generation unit has a function for updating said at least one item of said second key information
3 at a prescribed time interval (See Chou Col. 5 Lines 34-39, Col. 6 Lines 59-61 and 7 Lines 2-5);
4 and said recording circuit has a function for recording information capable of identifying timing
5 when said second key information generation unit updates said key information (See Chou Col. 5
6 Lines 43-48).

7 Regarding claim 4, Chou and Wonfer disclosed that said digital signal has a packet
8 format of a prescribed length (See Chou Col. 5 Lines 34-39); and said recording circuit has a
9 function for adding information capable of identifying timing where said second key information
10 generation unit updates said key information, and where such information is added to packets of
11 said digital signal and recorded on said recording medium (See Chou Col. 5 Paragraph 4 and
12 Col. 6 Paragraph 5).

13 Regarding claim 5, Chou and Wonfer disclosed said encryption circuit has a function
14 capable of selecting between a first function for encrypting and outputting said digital signal, and
15 a second function for outputting said digital signal as is without encryption (See the rejection of
16 claim 1 above); and said recording circuit has a function for recording, in a prescribed area on
17 said recording medium, encryption flag information indicating whether or not said digital signal
18 is encrypted, and, when not encrypted, not recording said second key information (See Wonfor
19 Col. 8 Lines 17-23 and Table 2).

20 Regarding claim 6, Chou and Wonfer disclosed that said digital signal has a packet
21 format of a prescribed length (See Chou Col. 5 Lines 34-39); and said recording circuit has a
22 function for adding encryption flag information indicating whether or not said digital signal is

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1 encrypted, to packets of said digital signal, and a function for recording on said recording
2 medium (See Wonfor Col. 8 Lines 17-23 and Table 2).

3 Claims 7-12, and 14-17, are rejected under 35 U.S.C. 103(a) as being unpatentable over
4 the combination of Chou and Wonfor, as applied to claim 1 above, and further in view of Kim
5 (US Patent Number 6,466,733).

6 Regarding claim 7, the combination of Chou and Wonfer disclosed a digital signal
7 recorder in which a digital signal of a packet format of a prescribed length is input comprising:
8 first key information generation unit to generate at least one item of first key information which
9 is apparatus specific key information; second key information generation unit to generate at least
10 one item of second key information; key generation unit to receive both of said first and second
11 key information generated by said first key information generation unit and said second key
12 information generation unit, and perform a prescribed arithmetic operation to generate a key; an
13 encryption circuit which receives said key and said digital signal, encrypts said digital signal
14 with said key and outputs the resulting encrypted digital signal in a case where said digital signal
15 needs copy protection; and a recording circuit which records at least one of said at least one item
16 of second key information generated by said second key information generation unit, together
17 with said encrypted digital signal in a case where said digital signal needs copy protection, and
18 records said digital signal without encryption in a case where said digital signal needs no copy
19 protection (See rejection of claims 1-2 above), but failed to disclose dividing the signal into other
20 prescribed lengths; a synchronization signal, recording information signal, auxiliary information
21 signal, and first error correction code are added thereto to define a block format; one track is
22 formed by a prescribed number of blocks thus made; a second error correction code is added in

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1 units of n tracks (where n is an integer 1 or greater); said second error correction code is also
2 divided and said first error correction code is added thereto to constitute a block format; and said
3 tracks are recorded on said recording medium.

4 Kim teaches a method for recording a digital transport stream by creating tracks from
5 video packets and providing three error correction codes to each track (See Kim Figs. 2, 3, and 5
6 and Col. 6 Paragraphs 4-7 and Col. 7 Paragraphs 3-4).

7 It would have been obvious to the ordinary person skilled in the art at the time of
8 invention to employ the teachings of Kim in the recorder of Chou and Wonfer by storing the
9 encrypted packets in the ECC block format of Kim. This would have been obvious because the
10 ordinary person skilled in the art would have been motivated to protect the stored programs
11 against errors.

12 Regarding claim 8, see the rejection of claim 1 above wherein it would have been
13 obvious to store the frame identification number in an auxiliary storage area because the frame
14 identification number is auxiliary data.

15 Regarding claim 9, see the rejection of claim 3 above.

16 Regarding claim 10, Chou, Wonfer, and Kim disclosed that timing information was
17 included in the stored block data (see Kim Col. 5 Paragraph 6).

18 Regarding claim 11, Chou, Wonfer, and Kim disclosed that timing information was
19 stored in an auxiliary section (See Kim Col. 6 Paragraph 4 and Col. 7 Paragraph 3).

20 Regarding claim 12, Chou, Wonfer, and Kim disclosed adding timing information to the
21 blocks identifying the timing of the packets (See Kim Col. 2 Lines 54-57)

Regarding claim 15-17, see the rejection of claims 5-6 above.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Chou, Wonfor, and Kim, as applied to claim 14 above, and further in view of Yuval et al. (US Patent Number 5,586,186) hereinafter referred to as Yuval.

The combination of Chou, Wonfor, and Kim disclosed encrypting certain data and not other data, (See the rejection of claim 1 above), but failed to disclose switching to determine whether or not to encrypt every n tracks.

Yuval teaches that for efficiency, only every nth track should be encrypted (See Yuval Col. 6 Lines 13-23).

It would have been obvious to the ordinary person skilled in the art at the time of invention to employ the teachings of Yuval in the copy protection system of Chou, Wonfor, and Kim by encrypting every n th track. This would have been obvious because the ordinary person skilled in the art would have been motivated to make the copy protection system more efficient in both the encryption and decryption.

Conclusion

Claims 1-18 have been rejected.


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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew T. Henning whose telephone number is (571) 272-3790. The examiner can normally be reached on M-F 8-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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